

**TECHNICAL REVIEW DOCUMENT**  
**for**  
**MODIFICATION TO OPERATING PERMIT 96OPWE154**

Public Service Co – Ft. Lupton Combustion Turbines  
Weld County  
Source ID 1230014

Prepared by Jacqueline Joyce  
January 15, 2003

**I. Purpose:**

This document establishes the decisions made regarding the requested modification to the Operating Permit for Public Service Company's Ft. Lupton Combustion Turbines. This document provides information describing the type of modification and the changes made to the permit as requested by the source and the changes made due to the Division's analysis. This document is designed for reference during review of the proposed permit by EPA and for future reference by the Division to aid in any additional permit modifications at this facility. The conclusions made in this report are based on the information provided in the original request for modification submitted to the Division on December 31, 2002 and telephone conversations with the source. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

**II. Description of Permit Modification Request/Modification Type**

The renewal Operating Permit for the Ft. Lupton Combustion Turbines was issued on July 1, 2002. Public Service Company (PSCo) recently began construction of a new fuel oil storage tank to replace two (2) 2.8 million gallon storage tanks that have been removed from the facility. PSCo recently became aware that although the new tank would qualify as an insignificant activity based on emissions (emissions below APEN de minimis levels per Reg 3, Part B, Section II.E.3.a) and tank contents and throughput (per Reg 3, Part C, Section II.E.3.fff), the tank could not be considered an insignificant activity because the tank is subject to recordkeeping requirements in 40 CFR Part 60 Subpart Kb and applied for a modification of their Title V operating permit to include the tank as a

significant emission unit. The APEN submitted for the permit modification indicated a requested processing rate of 1 million gallons per year and VOC emissions of 45 pounds per year.

Colorado Regulation No. 3, Part C, Section X.A identifies those modifications that can be processed under the minor permit modification procedures. Specifically, minor permit modifications “are not otherwise required by the Division to be processed as a significant modification” (Colorado Regulation No. 3, Part C, Section X.A.6). The Division requires that “any change that causes a significant increase in emissions” be processed as a significant modification (Colorado Regulation No. 3, Part C, Section I.B.36.h.(i)). According to Appendix D of Regulation No. 3 (Section I.F, revisions adopted July 15, 1993, Subsection I.G for modifications) the Division considers that a significant increase in emissions is the potential to emit above the PSD significance levels (40 tons/yr of VOC). The APEN submitted by the source indicates a processing rate of 1,000,000 gal/yr and indicates associated VOC emissions of 45 lbs/yr, which is clearly below the significance levels. However, determining whether a modification causes a significant increase in emissions is based on the potential to emit, rather than actual or projected emissions. The Division estimated potential emissions from the tank based on both turbines operating on fuel oil for 8760 hrs/yr. Based on a design heating value of 662 mmBtu/hr for each turbine and a fuel oil heat content of 137,000 Btu/gal, the Division calculated that the maximum annual fuel consumption rate would be approximately 85 million gallons per year. Based on these assumptions the potential VOC emissions would still be less than APEN de minimis levels (2 tons/yr), therefore, the Division considers that this modification would not cause an significant increase in emissions and could be processed as a minor modification.

In addition, the Division requires that “any change that is considered a modification under Title I of the Federal Act” be processed as a significant permit modification (Colorado Regulation No. 3, Part C, Section I.B.36.h.(ii)). Appendix D of Regulation 3 describes more specifically what constitutes a modification under Title I of the Federal Act and Appendix D (Section I.F, revisions adopted July 15, 1993, Subsection I.G for modifications) indicates that a modification which triggers NSPS is considered a Title I modification. As previously indicated, the tank is subject to the provisions in 40 CFR Part 60 Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced after July 23, 1984). However, since the liquid stored in this tank has a maximum true vapor pressure less than 3.5 kPa, the tank is exempt from the NSPS general provisions (40 CFR Part 60 Subpart A) and the provisions of 40 CFR Part 60 Subpart Kb, **except that** the provisions of 40 CFR Part 60 Subpart Kb §§ 60.116b(a) and (b) apply. 40 CFR Part 60 Subpart Kb §§ 60.116b(a) and (b) require that the source keep readily accessible records showing the dimensions of the vessel and an analysis showing the capacity of the storage vessel for the life of the tank. Under the construction permit procedures in Colorado Regulation No. 3, Part B, no public comment period would be required to permit this tank. Therefore, since public comment would

not be required if this tank were processed as a construction permit and because the NSPS requirements are not substantive (i.e. not an emission limitation, control requirement or design restriction), the Division considers that this modification can be processed as a minor modification.

### III. Modeling

As discussed previously, since the potential VOC emissions from this tank are less than APEN de minimis levels (2 tons/yr). This tank replaces two larger tanks that were previously located at the facility. The APEN submitted by the source indicates that the projected or actual VOC emissions from this tank are 45 lbs/yr. Modeling is not required for VOC emissions.

### IV. Discussion of Modifications Made

#### Source Requested Modifications

The Division addressed the source's requested modifications as follows:

The tank is subject to the following applicable requirements:

- APEN reporting (Reg 3, Part A, Section II)
- 40 CFR Part 60 Subpart Kb, as adopted by reference in Colorado Regulation No. 6, Part A, specifically this unit is subject to the following:
  - Maintain records (per § 116b(b)) for the lifetime of the source (40 CFR Part 60 Subpart Kb § 116b9a))
  - Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the vessel (40 CFR Part 60 Subpart Kb § 116b(b)).
  - Since this tank stores liquids with a maximum true vapor pressure less than 3.5 kPa, **this vessel is exempt** from the requirements of 40 CFR Part 60 Subparts A and Kb, except for §§ 60.116b9a) & (b) (40 CFR Part 60 Subpart Kb § 110b(c)).

As discussed previously, the Division has estimated the potential to emit for this tank to be less than 2 tons/yr of VOC. Based on emissions, this tank would not be required to get a construction permit but must do so because the tank is subject to NSPS recordkeeping requirements. Therefore, since the potential to emit is below levels that would require permitting, the Division is not including an emission or processing limit in the operating permit. However, the tank is still subject to APEN reporting requirements and the permit will require that the quantity of fuel processed through the tank be monitored and recorded annually and that VOC emissions from tank breathing and working losses shall be determined annually using TANKS 4 or higher.

## **Other Modifications**

In addition to the requested modifications made by the source, the Division used this opportunity to include changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this modification.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments on other permits, to the Ft. Lupton Combustion Turbines Operating Permit with the source's requested modifications. These changes are as follows:

### **Page Following Cover Page**

Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Changed the Responsible Official.

### **Section IV – General Conditions**

The common provisions regulation (general condition No. 3) was revised effective September 30, 2002. Therefore, general condition No. 3 was revised as appropriate. Note that the only significant change was made to the language under 3.f (compliance certifications).

Removed the phrase "and upset conditions" to the title for General Condition No. 5 (Emergency Provisions). The Division had removed the upset conditions from this general condition because the upset provisions are now included under the common provisions in General Condition No. 3, however we failed to remove "upset conditions" from the title.

The citation in General Condition 17 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from "Reg 1" to "Reg 9".

### **Appendices**

Removed the two (2) 2,800,000 gal fuel oil storage tanks from the insignificant activity list in Appendix A. According to the minor modification application from PSCo, these two tanks have been removed.